DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024828
Date Inspected: 02-Jul-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	N/A			**CWI Present:**	☐ Yes	☑ No	
Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Approved WPS:**	☐ Yes	☐ No	☑ N/A
				Delayed / Cancelled:	☐ Yes	☐ No	☑ N/A

Bridge No: 34-0006
Component: OBG Segment

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Description of Incident: During Caltrans Quality Assurance (QA) Visual Testing (VT) verification of welds that end at cope/access holes and visual cope hole compliance located on Segments 14 East and 14 West, QA inspectors discovered the following issues:
-Throughout segments 14 East and 14 West panel points (PP) 125 to 128.7, numerous typical cope/access holes were discovered that do not comply with the contract documents.
-These cope/access holes have not been properly ground after welding/cutting and exhibit various non-compliant conditions pertaining to radii transition smoothness, offset, notches, slag, sharp corners, welded holes and linear indications.
-ZPMC Quality Control (QC) inspectors have tested and accepted these welds and cope/access hole areas.
-QA inspectors have previously brought these cope/access hole issues to the attention of ZPMC QC and ABF QA personnel.

Visual Inspection after Blast

OBG Segment 14W

This QA Inspector performed a preliminary random visual inspection on OBG Segment 14W, after the grit blast of the interior components of the Edge Plate, Anchor Plate, longitudinal diaphragm, floor beams and side plate cross

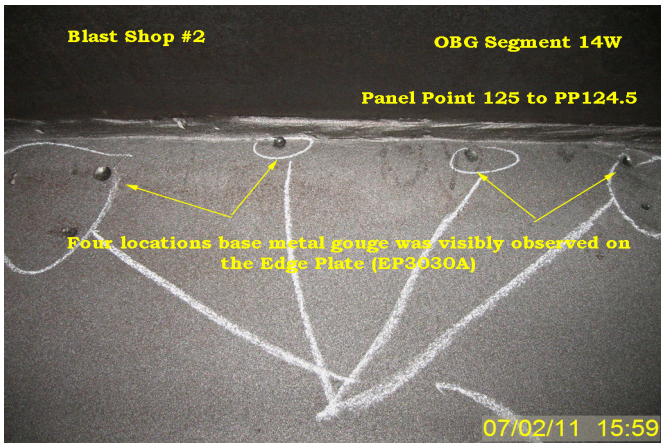
beam side and cable side of OBG Segment 14W. Areas of visual weld defects that will require welding were taped and will be repaired after the coating is applied. ZPMC QC personnel are aware of these areas and were present during the inspection.

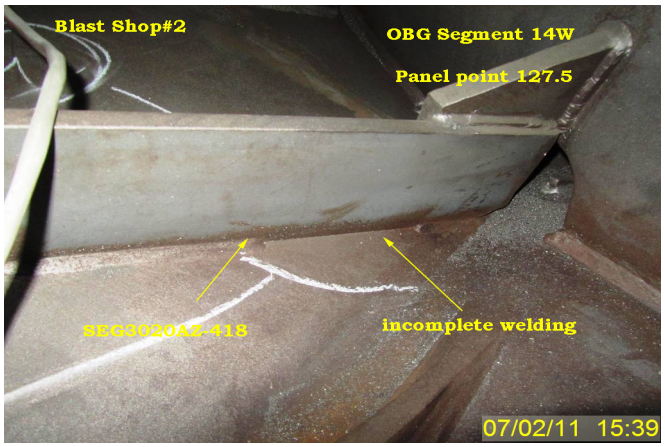
Visual inspection after the blasting: During random Quality Assurance Visual review of welds located on OBG Segment 14W, this Quality Assurance Inspector (QA) observed following details:

- At PP128.7 (W) cable side, no welding on edge plate (EP3029A) to floor beam (FB3345A).
- At PP128.3 (W) cable side, near to cope hole location incomplete welding on Floor Beam (FB3342A) Vertical stiffer to SA3416A weld.
- At PP128 (W) cable side, near to cope hole location incomplete welding on Floor Beam (FB3336A) to Longitudinal Diaphragm (LD3051A) weld.
- At PP128 (E) cable side, excess weld metal on Floor Beam (FB3336A) flange to Deck Panel Diaphragm (DP3171A) weld.
- At PP127.5 (W) cable side, near to cope hole location incomplete welding on Floor Beam (FB3330A) stiffener to Longitudinal Diaphragm (LD3051A) weld.
- In between PP126.5 and PP127 cable side, incomplete welding and under fill on Side plate (SP3144B) RS stiffener welds.
- At PP127 (W) cable side, a weld metal grinding was visibly observed on floor beam (FB3325A) to SA8502A.
- At PP126.5 (E) cable side, a base metal deep gouge was visibly observed on the longitudinal diaphragm (LD3049B).
- At PP126.5 (E) cross beam side, incomplete welding on edge beam (EB3056A) to Floor Beam (FB3319A).
- In between PP127 and PP126.5 cross beam side, a base metal gouge was visibly observed on the Side Plate (SP3141C).
- In between PP126 and PP126.5 cross beam side, a base metal repair need to be done on Side Plate (SP3140C).
- In between PP126 and PP126.5 cross beam side, two location base metal repair need to be done on Side Plate (SP3141C).
- In between PP126 and PP126.5 cross beam side, a base metal gouge was visibly observed on the Floor Beam (FB3321A).
- At PP 128.7, cluster porosity on weld SP to 5th I-rib from W16 location.
- Near PP128 west side, porosity observed at three locations on SP to I-rib (5th, 6th and 10th I-rib from W19 location) weld.
- At PP 127 East side, Weld joint number SEG3020AZ-422 slag and temporary attachment were not removed properly at underneath of weld.
- At PP127.5 west side, weld joint number SEG3020AZ-418 welding incomplete.
- At PP 127.5 west side, weld joint number SEG3020AZ-416 slag not removed properly at underneath of weld joint.
- In between PP 128 to PP 128.3, splice plate X4962C base metal damaged in between 11th and 12th stiffener from W16 location.
- At PP 128.3 east side, deep gouge on weld joint number SEG3020E-051 near 6th I-rib from W4 location.
- At PP 128 west side, base metal gouged on FB3341A near W4 location.
- At PP127 (E) cable side, deep gouges on FB3327A near W3 location.
- At PP 127 (E) cross beam side, SP to I-rib (1st, 4th, 5th and 6th from W4 location) welding incomplete.
- At PP 127 (E) cross beam side, base metal of SP 3141D damaged in between 6th and 7th I-rib from - W16

location.
- At PP126 (W) cross beam side, a incomplete welding on the Floor Beam (FB3321A) to side plate (SP3141C).
- In between PP125 and PP125.5 cross beam side, a base metal gouge was visibly observed on the Side Plate (SP3141B).
- At PP125.5 (E) cross beam side, a dent on the Side Plate (SP3140B)
- In between PP125 and PP124.5 cross beam side, a base metal gouge was visibly observed on the Bottom Plate (BP3094A).
- At PP125.5 (E) cross beam side, a base metal gouge was visibly observed on the Side Plate (SP3140A).
- In between PP125 and PP124.5 cross beam side, four locations base metal gouge was visibly observed on the Edge Plate (EP3030A).
- For further information, please see the attached picture.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Vibin	Quality Assurance Inspector
Reviewed By:	Patel,Hiranch	QA Reviewer